

# LISTING Newsletter

Newsletter of the  
Long Island Sinclair/Times  
Users Group  
.....

Incorporating NYTSE

February - March, 1988

What's my excuse? Read why these issues are late- inside. This double issue will bring LISTING back on time...along with the April issue which will be out soon. SORRY!

Timex/Sinclair 3068 \$199!!!

READ ALL ABOUT  
THEM AND OTHER  
NEWS FROM-THE  
"GUY FROM-TIMEX"

Timex Disk Drives \$49!!!

**WANTED: A NEW EDITOR IS  
NEEDED FOR LISTING!**

IT AIN'T THAT BAD- FOR  
DETAILS CALL OR WRITE JOE  
NEWMAN...BETTER YET, ATTEND A  
MEETING. IF YOU HAVE SOME  
TIME, ENERGY, AND ANY  
EDITING SKILLS,  
PLEASE APPLY! THE  
SOONER, THE BETTER.

L.I.S.T.  
5 Peri Lane  
Valley Stream, NY 11581

MAY MEETING TO:

MAY MEETING NOTICES:  
and SUN. (MAY 15)

WILL BE PUBLISHED IN THE APRIL  
ISSUE. THE PUBLISHING DATE OF  
THIS ISSUE MAKES PRINTING OF  
APRIL MEETING DATES USELESS-  
THEY PASSED ALREADY. SORRY FOR  
ANY INCONVENIENCE.

FIRST CLASS MAIL  
DATE MEETING NOTICE  
Please DON'T delay!

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|           LISTing Listing           |
| Please send submissions to:         |
|   Joe Newman, 325 W. Jersey St.,   |
|   #2D, Elizabeth, NJ 07202         |
| PLEASE DON'T STAPLE THINGS TO YOUR |
| SUBMISSIONS IF THEY ARE CAMERA READY|
| or send items for the LIST group   |
| to: LIST, Harvey Rait              |
|   5 Peri Lane                      |
|   Valley Stream, NY 11581          |
|   yearly LIST dues- $15            |
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#### SO WHAT'S MY EXCUSE NOW?

In case you haven't noticed, this newsletter is late...about a month late. In order to keep the newsletters on schedule I have decided to produce this double issue- February and March. You not only get both issues in one, but the newsletter gains two pages worth of space that would normally be taken up by the covers.

This still doesn't explain why the newsletter is late. The problem started about a month ago as I was preparing the following text on my QL. The QL froze and I was not able to get it to operate again after that. Hoping to be able to get the newsletter out somehow, I hauled out my backup QL. And as it usually happens, disaster was compounded- this QL would not work properly either. After many days of tinkering I discovered that a chip was blown on my main QL...and I had to wait to get in a new one. The backup QL had a simpler problem, but it was harder to track down- ONE lead to ONE capacitor on this QL was broken- when the leads touched, the QL worked. But if they separated or twitched CRASH went the QL. This has also been repaired. So now you have the newsletter. I can't apologize though cause it was the QL's who were bad- I expect a formal apology from both of them shortly.

#### WHAT HAS

1 Megabyte RAM included  
is a Virtual Memory machine  
256 Colors & HIGH rez graphics

and much more!

"The only machine...that would be in its class today is the Amiga". Yes, and this would all be yours for... \$199.95!!! Yep, Timex planned it... the T/S 3068 !!! but I keep wondering if the 3068 has anything to do with the so called 'Sinclair Enigma' that was speculated about some time ago.

And if that ain't enough damage, get this- Timex had planned to sell 3.5" disk drives for use with the 2068- for \$49.95! This plan was far enough along that Timex knew where they would get the drives from.

Now here's the final kicker- have you ever seen the photo of a 'Timex Bus Expansion Unit' in Time Designs or the EAB catalog? The engineering for the unit was COMPLETED.

How did I happen to suddenly come across this info? It so happens that the president of PSION, Inc. here in the U.S. was the Product Development Director (I think!) for the 2068 at Timex. Billy Skyrme, the 'GUY FROM TIMEX', attended the February 21 meeting of LIST. And the stories he told! He also told us the sad news that all the info about the 2068 and proposed products for it are as good as non-existent. It seems that due to legal reasons this info will probably never be available to us plebes. And what the engineers and other people involved with the 2068 know dispersed with them when Timex was paid off got out of the computer business.

#### ORGANIZE YOUR LIFE

The main reason Mr. Skyrme showed up at the LIST meeting was to show off the Psion Organizer hand held computer and its accessories. The Organizer is a pretty amazing and versatile little device. About the size of a typical scientific calculator, it is MUCH more than a calculator. There are currently two versions of the Organizer- I will primarily discuss

the Organizer II, the more advanced unit.

This unit comes with 32K RAM, a built in operating system and programming language known as DPL, 2 line LCD display (which is like a window- one can scroll in any direction over a 'page' of data), sound, and more. It is all powered by a 9-Volt battery.

One of the most interesting features are the two built-in solid state data 'drives'. These are essentially considered to be just like disk drives- B and C (internal RAM is considered drive A). Each drive can take one (up to 128K) RAM or EPROM cartridge. This means over 256K is available in one handheld unit!

The Organizer is actually a very versatile instrument. Wherever pen and paper are now used to take short notes and/or measurements, the Psion Organizer can be used. Current users already include: time management training, electronic field data collection at survey sites, recording site geometry at archeological digs, water pipe maintenance, banking, and more.

If you do a lot of writing, than a lap top computer would probably be more appropriate. But for recording of numbers and other 'simple type-in' answers, the Psion would be appropriate.

So how much does all this power cost? The Organizer I is \$179.99, the II model is \$249.99. Datapak prices range from \$30 to \$150. Currently available accessories include a communication link (RS-232), bar code wand, magnetic swipe card reader, ac adaptor, and other stuff on the way. Program paks are also available, along with an DPL development system. This allows one to develop Organizer programs on an IBM compatible, then download those programs into the Organizer. Prices for accessories and software range from \$20 to \$100, and more for the bar code accessories and swipe reader.

If you're interested in the Organizer, you can contact Psion at the following:

Psion Incorporated  
320 Lake Road  
Watertown, CT 06779  
Tel: 203-274-721

PS- Psion won't sell through mail order dealers like me- they may go mail order through a high-end company like Sharper Image. (Hmph).

#### UPCOMING FESTS...

So far two Sinclair computer fests are planned for the late summer. The Greater Cleveland Sinclair User's Group is having a 'Timex-Sinclair-Amstrad 1988 Midwest Regional Conference'. The dates are August 26 and 27. It will be held at the Beck Center for the Arts in Lakewood, Ohio (a suburb of Cleveland). For more information contact Andy Kosiorek on CompuServe ID #75046,3420, or write the Cleveland Group: 2192 Glenbury Avenue, Lakewood, Ohio 44107.

I see two mistakes about the above, and one gripe. First, the Beck Center is NOT a hotel- it seems hotel finding and reserving is YOUR problem. Second- no hotels were suggested or any other info. in the literature I received. The gripe is that why should it be called an AMSTRAD fest too? Even though Amstrad still sells the Spectrum, it is still sold as the SINCLAIR Spectrum. I better not get started with that argument- that's another article for another time!

The other fest, which sounds very interesting, is the Third Annual International/Great North West TS Mini Fair (are these guys competing for titles?). This will be held on August 6 and 7 in the Cosmopolitan Hotel in Portland, Oregon. Sure its far, and air fare from the NY area is about \$300, but the hotel rate is \$38 per night- YES THIRTY EIGHT DOLLARS. The savings on the hotel may be worth the air fare...and think of that scenery-

grass, trees, CLEANER AIR!!! For more info write: 1419 1/2 7th Street, Oregon City, Oregon 97045 or call (503) 655-7484...yep, its RMG.

#### LISTING NEEDS AN EDITOR- NOW!

How long have I been the editor of LISTing? It can't be almost two years already...or can it?? Anyways, I would like to find a new editor...the sooner the better. Don't get me wrong! I don't hate it- its just that finals are coming up in another month or so. Also, next semester I start my major courses. In other words, I've got to begin real studying! I already have very little spare time as it is...going to school full time, acting as Director of Computer Systems Operations for the Baruch College Admissions Department (part time), editing this newsletter, doing video production work for a class, and let's not forget Variety Sales (now VCE).

I'm not trying to brag...I just felt that you should get an idea of why I feel I have to give up editing the newsletter. Don't worry- I'll continue doing it until a new editor is found, or until I feel I have no choice but to give it up...which is not now!

- Joe Newman

#### LIST TAPE LISTINGS

The following is a listing of the programs on LIST tape #9. These are all 2068 programs. To get this tape or any of the other LIST tapes, send \$6.00, OR a QUALITY 60 minute tape and \$3.00 to Harvey Rait, at the address in the box on the first page. Better yet, come to the meetings and pay only \$1.50 per tape (call or write Harvey first so he can have the tape(s) ready).

- 1 Wrapping
- 2 PRCODE
- 3 WORD PROCS
- 4 AERCQ INT
- 5 TALK CLOCK
- 6 ZTALK
- 7 INVOICING

- 8 BIORHYTHMS
- 9 READER 1
- 10 READER 2
- 11 TRACE
- 12 RENUMBER
- 13 CASE SWAP
- 14 VARS
- 15 SCROLL
- 16 SCROLL
- 17 SCROLL
- 18 OVERS 1
- 19 OVERS 2
- 20 PATTERNS 1
- 21 PATTERNS 2
- 22 PAINTING
- 23 PICTURE
- 24 FLAG
- 25 FILE
- 26 ANDROIDS
- 27 B & C
- 28 SIMON SAYS
- 29 FINAL
- 30 TEST
- 31 SECONDS
- 32 NAVIGATION
- 33 SQ ROOT
- 34 UP & DOWN
- 35 DIG. TIMER
- 36 PAPER & INK
- 37 BEWARE DOG
- 38 EXAM
- 39 KEYBOARD M
- 40 LAS VEGAS
- 41 PARROT
- 42 KENTACKY
- 43 STM
- 44 MC EXAMPLE
- 45 SHAKESPEARE
- 46 TRESURE H
- 47 I.T. ONE
- 48 THE I.T.
- 49 WOLF & GOATS
- 50 RACER
- 51 AT MARKET
- 52 WINDOWS
- 53 STICKS
- 54 NEW CHR\$
- 55 NEW CHR\$
- 56 NEW CHR\$
- 57 NEW CHR\$
- 58 MESSAGE
- 59 TITLEMAKER
- 60 REGRESSION
- 61 BAR GRAPH
- 62 SCROLL\$
- 63 AUTUMN
- 64 NO. SORT

65 WORD SORT  
 66 DERBY DAY  
 67 ATTR TABLE  
 68 METRIC  
 69 HEADER  
 70 HEADER/C  
 71 SEARCH  
 72 S/DATA  
 73 DEMOLITION

SIDE B

1 DEMOLITION  
 2 DEMOLITION  
 3 SUBMARINE  
 4 BRICKS  
 5 MONEYPAIL  
 6 CHOMPER  
 7 ASTEROIDS  
 8 TREE MAKER  
 9 MOZART WA  
 10 SANTA WA86  
 11 LOANS WA86  
 12 E Z DIS  
 13 UDG DESIGN  
 14 NETWORK  
 15 128 COLORS  
 16 BANANAS  
 17 M/C LOADER  
 18 PSGE 32/64  
 19 MM1  
 20 CHARACTERS  
 21 FULLGIRLS  
 22 JANIS  
 23 CONVERSION  
 24 TIMER 1C  
 25 TITLE/CODE  
 26 BBS  
 27 ATTR  
 28 2XSIZEHTE  
 29 3 CHARS  
 30 TITL/SHOOT  
 31 TITL/SHOOT  
 32 PAINTSIC  
 33 SANTA  
 34 SCRAMBLER  
 35 TAPE/ANALY  
 36 MULTIFILE  
 37 SAVER  
 38 SAVER MC  
 39 TASPRINT  
 40 TASFONT 0  
 41 TASPRINT  
 42 TAS2PRINT  
 43 TAS2PRINT  
 44 TASPRINT  
 45 COMMENTS

The following lists are the contents of LIST QL MICRODRIVE CARTRIDGES #1 and #2. To order, contact Harvey R. for prices.

List 2

44/218 sectors  
 DISASSEM  
 ATTACK  
 balloons  
 boot  
 dumpx  
 dumpy  
 copiera  
 joy6\_doc  
 joy62\_doc  
 COLOUR  
 color  
 suburbia  
 the\_city  
 joyand  
 joytest  
 sphere  
 organ\_bas  
 humony  
 story  
 udg  
 11  
 spurt  
 TRACE  
 DEBUG  
 LIST\_ME\_FIRST  
 coinflip  
 driver

list  
 5/218 sectors  
 Saucer\_Screen  
 World  
 Size\_base  
 Read\_Me  
 Clock\_MC  
 Printer\_Codes  
 Poster\_Maker  
 USA1  
 Backup  
 Banner  
 Boot  
 Qmonix\_COM\_Demo  
 Do\_Demo



## THE GUY FROM TIMEX

by Steven Kaye

Timex planned to manufacture and sell a 3868 computer with 1 meg. of memory, 256 colours, and virtual memory for a target price of \$199.95. This was just one of the bits of information that was revealed by Mr. Billy Skyrme, the President of Psion America, formerly of the Timex Computer Corp. during the Feb. meeting of L.I.S.T.

Mr. Skyrme told the group how his own career paralleled that of the computer industry. He started working with computers back in 1958. The early machines had 650 Bytes of memory and utilised toggle switches for binary inputs. He said that he was a math and physics guy and described how back in the primordial days people did not really know what computers really were. He migrated over to the marketing side when he saw the need for personal or home machines. He described how he constructed one of the early kits and had little support.

Timex and Clive first came together following the development of the ZX 80. Sir Clive was always of a technical bent and did not care for the marketing aspects of the industry. He was seeking a manufacturer and he contacted Timex Scotland. Billy Skyrme had heard of the machine and started manufacturing since the machine offered enough horsepower to provide good human interfacing. Marketing surveys indicated that many people out there would love to have a computer. This led to a marketing agreement between Timex and Sir Clive. Timex introduced the TS 1000 which offered purchasers a label change and twice the memory of the Sinclair ZX 81. The machine was extraordinarily successful in the marketplace. Reaction to the machine ranged from the doorstep description coming from the computer illiterates to the technical people who discovered that it was quite a little beast.

# AN R.L.E. GRAPHICS GALLERY

Graphics stolen from  
CATS Newsletter

July, 1987

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A holy war occurred in Timex over the development and introduction of Colour machines. One faction at Timex felt that the Spectrum was a very dirty machine in F.C.C. terms. They felt that the Spectrum must be redesigned to clean it up and also to prove that they could do a better design job than Clive did. Billy Skyrme and the other faction sought to rush and get a colour machine out into the marketplace as soon as possible. They took the Spectrum, did quick and dirty work to bring it to American standards and brought it to the F.C.C. The machine passed but they lost. Timex developed and marketed the 2068. Timing was a problem. When it was introduced, Commodore and Texas Instruments were having price wars. This lowered prices and destroyed the market. The computer price wars led to the projection of no profits from the home computer market. Both the 2068 and the 3068, which was then under development were killed. Timex needed cash to reorganize the watch business which was the bread and butter of the company. At the time, first L.E.D. and then L.C.D. solid state watches flooded the market and Timex needed the funds to develop new products.

The proposed 3068 would have been the supercomputer of the home computer industry. At the time when the project was abandoned they had not yet selected a microprocessor but were looking at either the 28000 or the 68000. This machine, which was had a target price of \$199.95 would have offered users 256 colours using a standard T.V. as well as 1 megabyte of memory. According to Billy Skyrme, the only machine on the market close to the 3068 is the Amega. Mr. Skyrme left Timex in 1984.

He described how Timex did not suddenly abandon 2068 purchasers when it made the decision to pull out of the computer market. Although they were already out of the computer business, the people at Timex recognized the need for a technical manual. They published it out of good will to the users while they were disbanding the computer unit.



Both Sinclair and Timex made major contributions to the small computer industry. The ZX 81 established the correct environment for IBM and APPLE. Back in 1981 people outside of electronics professionals did not know about computers. The T.S. 1000 opened many minds. In the field of computer logic, Clive Sinclair developed the logic chip in the ZX 81. Showing how one chip can be used to replace many individual components. Timex developed the logic chip in the 2068. Bank Switching was also a Timex innovation. Many questions were answered by Mr. Skyrme. The great mystery about why Sinclair products continued to use tape drives when the rest of the industry went to discs was explained. Clive had a problem with disc drives because he did not invent them. Also, the mystery of the Westridge modem was discussed. Mr. Skyrme said that the modem was not marketed by Timex because it had problems.



Mr Skyrme dashed the hope of those Timex loyalists that have been spreading rumours for the past few years about sales of the rights to the 2068. Timex is a mass manufacturer and is willing to produce anything if it has large orders. This is what led to the production of the Portuguese 2068 and the Polish 2048 machines. Legal problems and the tangled mass of agreements between Timex and Sinclair make it impossible for anyone else to build or sell the 2068. The big surprise was that TIMEX IS STILL MAKING AND SELLING THE T.S. 1000 FOR INDUSTRIAL APPLICATIONS IN PROCESS CONTROL AND INTERFACING. They market the machine both as a complete board and as a computer within the plastic case. They do not sell the machine for consumer applications.

As users, the members of L.I.S.T. really appreciate the time that Mr. Skyrme was willing to spend to attend our meeting. His presentation solved many mysteries concerning the demise of our favourite computers and shed new light on the corporate decisions which control the home computer industry.

THIS STORY WAS WRITTEN ON A T.S. 1000  
USING WORDSINC 2.1 AND A TIMEX 2040  
PRINTER



# STOLEN FROM TS2068 SAFE DISK UPDATE

## SDOS MAIL MERGE (for OLIVER DISK) Complete This Issue

A Major Software for SDOS

The feature program for the October 88 issue is "SDOS MAIL MERGE", a major software that was designed specifically for this issue. There are several reasons why this software is special, and why almost all will surely want it. First, it is the ONLY "printing software" that will work AS IS with ANY Centronics printer, plus the TS-2040 printer. There is absolutely no monkeying around changing line numbers required to make it print with "brand y" printer. Second, it has many more features than just a Mailing List software. It is a "Dual Data Base" and printing software that can be used for many purposes. Third, the data products are simple Character arrays that can easily be transferred from diskette to other operating softwares, using the LOAD /"x"DATA x\$() command.

The purpose for designing SDOS for SAFE DISK UP-DATE was two fold. 1. A good software of this kind was not available. 2. A vehicle was needed for illustrating the versatility of SDOS. I'll tell you a little tale on myself to make a point. A year AFTER buying a new Edsel, I discovered that the seat would tilt forward, as well as adjusting fore and aft. We have that nice SDOS system which has many many capabilities to discover. Safe Disk Up-Date will try to reduce the discovery time. This software can unveil many tricks of SDOS programming. AND, it will definitely fill a gap in our TS-2068 software needs.

### FUNCTIONS

There are two main data bases, both flexible to the user. The "main" data base is for listings of all types, "Mailing List" being the common usage. A "field" consists of 7 lines of data. The data lines are organized by "field numbers" as follows: 1. Company Name. 2. Department. 3. Street Address. 4. City, State, Zip. 5. First name. 6. Telephone Nbr. 7. Other data. The operator is prompted to "Input Number of Fields". This allows from one to about 120 fields to be organized. Then prompts ask for inputs by line number. A listing can be discontinued at any time. Menu choice allows "adding to" the list at any field number. So, if one inputs 20 names and quits, the next entry can be started at "field 21" by prompt. Menu choices are: 1. Start New. 2. Correct. 3. ADD TO. 4. View. 5. Print/Labels/Envelopes. 6. SAVE. 7. DELETE Data. 8. Sort File. 9. LOAD File from Disk.

Ancillary functions are: 1. Centered Captions. 2. Page Management. 4. Directed Line Space. 5. Directed Page End. 6. Print a Centered Letterhead. 7. Print a Sign Off. 8. Single or Double line spacing. 9. Change Line Length. 10. Set Up a Outline. 11. Print Outline. The "Outline Functions"

- BILL JONES  
8

### Program Listing

```

400 INPUT "Number of Mailing list Names?"jh: LET k=h: LET bs=""
402 INPUT "Sort by: (1) First name (2) Last name"jz
404 IF z=oa THEN GO SUB VAL "1010": GO TO VAL "500"
406 IF z=ob THEN GO SUB VAL "640": GO SUB VAL "1010": GO SUB VAL "670"
500 GO TO VAL "2000"
640 CLS : PRINT FLASH oa:AT oj,oa:"Last Name Reverse- 40 Seconds":AT ok,oa:"Line 640": FOR n=oa TO h: IF os(n,oa)(oa TO od)=" " THEN NEXT n: RETURN
642 LET bs=os(n,oa)
646 IF bs(LEN bs)=" " THEN LET bs=bs( TO LEN bs-oa): GO TO VAL "646"
650 FOR l=LEN bs TO oa STEP -oa: IF bs(oa TO od)=" " THEN NEXT n
652 IF n>k THEN RETURN
654 IF bs(l)=" " THEN LET os(n,oa)=bs(l+oa TO )+" "+os(n,oa)( TO l): NEXT n
656 NEXT l
658 NEXT n
660 RETURN
670 CLS : PRINT AT oj,oa:"Replace First name- 40 Seconds":AT ok,oa:"Line 670": LET bs=""
672 FOR n=oa TO k: IF os(n,oa)(oa TO od)=" " THEN NEXT n: RETURN
674 IF n>k THEN GO TO y
676 LET bs=os(n,oa)
682 FOR l=oa TO LEN bs: IF bs(l)=" " THEN LET bs=os(n,oa)(l+oa TO ): GO TO VAL "686"
684 NEXT l
686 IF bs(LEN bs)=" " THEN LET bs=bs( TO LEN bs-oa): GO TO VAL "686"
688 LET os(n,oa)=bs+" "+os(n,oa)( TO l)
690 NEXT n
692 RETURN
1010 CLS : PRINT AT oj,oh: FLASH oa:"Sorting- 1 Minute":AT k,oh:"Line 1010": DIM v$(of,31): LET n=h
1020 LET i=n-oa
1030 FOR j=oa TO i
1040 LET K=j+oa
1050 FOR L=n TO K STEP -oa
1052 IF os(i,oa)(oa TO od)=" " THEN GO TO VAL "1100"
1060 IF os(L,oa)>os(j,oa) THEN GO TO VAL "1100"
1070 IF os(L,oa)(oa TO od)<>" " THEN LET bs=os(L,oa): LET v$(oa)=os(L,ob): LET v$(ob)=os(L,oc): LET v$(oc)=os(L,od): LET v$(od)=os(L,oe): LET v$(oe)=os(L,of): LET v$(of)=os(L,og)
1080 IF os(L,oa)(oa TO od)<>" " THEN LET os(L,oa)=os(j,oa): LET os(L,ob)=os(j,ob): LET os(L,oc)=os(j,oc): LET os(L,od)=os(j,od): LET os(L,oe)=os(j,oe): LET os(L,of)=os(j,of): LET os(L,og)=os(j,og)
1090 LET os(j,oa)=bs: LET os(j,ob)=v$(oa): LET os(j,oc)=v$(ob): LET os(j,od)=v$(oc): LET os(j,oe)=v$(od): LET os(j,of)=v$(oe): LET os(j,og)=v$(of)
1100 NEXT L
1110 NEXT J
1120 CLS : FLASH oo
1130 RETURN
2000 CLS : PRINT AT 2,6: INK 5:"MAIL":TAB 19: FLASH 1:("Yes" AND LEN os(1,1)>1)+("No " AND LEN os(1,1)<2): FLASH 01:"ML DATA":TAB 9:"MENU":TAB 19:"FREE":FREE 1:"TAB 6: INK 6:"<1> Start New":TAB 6: INK 5:"<2> Add to List":TAB 6: INK 6

```

CONT -

involve a second flexible data base to use for producing a outline with major and minor topics. Printing of the outline is in the outline format with selectable TAB for major topics. Minor topics are then indented five spaces.

#### OPERATION

Other uses of the mailing list data base are: Invoices, inventory lists, telephone lists, Magazine article indexes, or any data groups that one can set up in 7 line fields. The capacity of the mail/inventory data base is about 120 fields, as programmed. The fields may be dimensioned larger or smaller by simple line number adjustment (line nbr 2005).

Simplicity personified! You just cannot get into trouble, and the software is crash proof. A mistake in operation will result in a "report code" stop. The cure is <GO TO FN> in every case. <GO TO FN> presents the Function Menu, and all program parameters are preserved. There is only one possible exception to this easy fix. If you have established a "outline data base" and then you select "Start New" at the Mail List Menu, it is possible to "over dimension" the mailing list data base by input of too large a number for "Number of Fields". When a command is given to DIMENSION a character array, and insufficient memory exists, the vars file is corrupted which results in a CRASH. Now this little blurb on operation is indeed skippy, but what can one say when words are not necessary? The Menus provide ample guidance with literal selection choices, thus no need to study instructions.

The Mail/Inventory List Printer: A prompt asks for "Input Number of Fields to print". If printing labels or envelopes, "4" would be the correct input. Then "TAB, and Spaces between" are prompted. Inputs allow the printing to strike the labels or envelopes uniformly. The software differentiates between a three or four line address and spaces accordingly. Another prompt asks, "Twin Labels?". If Yes, then your own return address label prints between each "out label". When you want to print inventory or other data set-ups, an input of 7 will result in all 7 lines printing. Any number of fields 1-7 may be elected to print out.

Menu electives set up automatic SAVE or LOAD of the data bases OR a program that contains data. A prompt "Input File Number" makes each LOAD or SAVE discrete. LOAD selections result in the disk catalog presented on screen with a prompt "Input File Name". The Load is automatic and the Function Menu appears. At that time all software functions are available.

#### PROGRAMMING

SDOS Mail Merge utilizes the <LET /P=D> or <LET /P=T> functions of SDOS to print with any Centronics printer or the TS-2040. Inputs allow the configuration of desired line length for any pre-set print style. The built in SDOS printer driver is used for printing. The software itself

#### Program Listing (cont.)

```

1<3> View List""TAB 6;"4> Correct List""TAB 6; INK 5;"45)
Print Lab/Env/Inv""TAB 6; INK 5;"6> Disk SAVE""TAB 6;"7>
Delete Mail Data""TAB 6; INK 5;"8> Sort File""TAB 6; INK 6
1<"< FLASH 1;"9> FLASH 0;"> Function Menu""TAB 6; INK 5;"
(0) LOAD Mail File""TAB 6;"Page="pgi" ;TAB 20;"Line="inn
2002 PRINT AT 0t,okpgi" ;AT 0t,VAL "25";inn;" ;AT 0t,0t; F
LASH 0a;"ND " AND LEN 0a(0a,0a)<eb>+("Yes" AND LEN 0a(0a,0a
))0a;" FLASH 0a;AT 0t,VAL "24"; FREE
2003 GO SUB SQ: GO SUB 11: GO TO (Z<00 OR Z>01)*VAL "2000"+(
Z=00)*VAL "3020"+(Z=0A)*VAL "2004"+(Z=0A AND Z<0F)*VAL "2007
"+(Z=0F)*VAL "2600"+(Z=0G)*VAL "2058"+(Z=0H)*VAL "400"+(Z=0I
)*$FN
2004 CLS : PRINT AT 0J,0F; FLASH 0A;"Confirm, START NEV" FL
ASH 00""TAB 0F;"<y> Yes -or- <n> No": GO SUB SQ: GO SUB 1K:
IF Z=0A THEN INPUT "Input Nbr of Names"inx; IF ax$VAL "217">
VAL "27000" THEN GO TO VAL "2004"
2005 DIM 0a(ax,7,31): DIM 0a(ax,7,31): LET IN=0A: LET as=0A:
CLS : GO TO VAL "2009"
2006 GO TO VAL "2000"
2007 IF Z>0A AND Z<0F THEN INPUT "Ent Strt Nbr "jNS: CLS : I
NPUT "Ent end Nbr "jNX: CLS
2008 IF Z=0E THEN CLS : INPUT "Twin Labels? <y> yes or <n> N
o "t4: INPUT "Ent sps bet: "jSX: INPUT "Ent Tab "jTB: CLS
: INPUT "Nbr of Fields (1-7) 4 for labels"jx: PRINT AT 0U,0B
;"Do you want Page Control?": INPUT "<1> yes or <2> No "jK:
IF k=0a THEN PRINT AT 0U,00;"Ent ""Pg"" for same page, or a
nbr to change. ": INPUT PG: PRINT AT 0U,00;"Ent ""NN"" for s
ame line count, or nbr to re-set line count. ": INPUT NN
2009 FOR Q=MS TO MX
2010 IF Z<0C THEN GO SUB VAL "2022"
2011 IF Z=0D THEN GO SUB VAL "2110"
2012 IF Z=0C THEN GO SUB VAL "2034"
2014 IF Z=0E THEN GO SUB VAL "2040"
2016 IF 0>=MX THEN GO TO VAL "2000"
2018 NEXT 0
2022 CLS : PRINT AT 0F,0F;"M1 No. "j0
2024 CLS : PRINT AT 0g,00;0a;AT 0J,00;"Input "j("Co Name " AN
D IN=0A)+("Dept " AND IN=0B)+("St adr " AND IN=0C)+("ct,
St,2p" AND IN=0D)+("1st Name" AND IN=0E)+("Tel Nbr " AND IN=
0F)+("spare dta" AND in=0g))" or zz to quit.": INPUT T9: IF
T9="zz" THEN LET IN=0A: LET 0=MX: CLS : RETURN
2025 LET 0a(0,IN)=T9
2026 IF IN=0G THEN CLS : GO TO VAL "2030"
2028 LET IN=IN+0A: GO TO VAL "2024"
2030 PRINT AT 0H,00;0a(0,0A)'0a(0,0B)'0a(0,0C)'0a(0,0D)'0a(0
,0E)'0a(0,0F)'0a(0,0g)""OK? <Y> Yes, or <N> No": GO SUB 1K
: IF Z=0B THEN LET IN=0A: GO TO VAL "2024"
2032 CLS : LET IN=0A: RETURN
2034 IF 0a(0,0A)(0A TO 0B)="zz" THEN GO TO m1
2035 PRINT AT 0E,00;"M1 No. "j0'"0a(0,0A)'0a(0,0B)'0a(0,0C)'
0a(0,0D)'0a(0,0E)'0a(0,0F)
2036 PRINT 0a(0,0g)
2037 PRINT "Key ENT for Next": PAUSE VAL "4e4": CLS : RETUR
N
2038 IF LEN 0a(0,0A)<0E THEN RETURN
2040 FOR y=0a TO x: IF y=0a AND 0a(0,y)( TO 0b)="-" * THEN RE
TURN
2041 LPRINT TAB tbj0a(0,y): LET mn=nn+0a: NEXT y: GO SUB VAL
"2045"
2042 IF t9="y" OR t9="Y" THEN FOR y=0a TO 0d: LPRINT TAB tbj
n9(y): LET mn=nn+0a: NEXT y: GO SUB VAL "2045"
2044 RETURN

```

does not command the printer to change print styles. Style changes must be set manually with the printer's dip switches, or by direct commands entered in the "K mode". If the user desires software controlled printer style changes, it is practical to build a few more lines to do that. These custom printer control lines would be operated in the K mode by either <GO TO line> or <GO SUB line>.

"Now you see it, then you don't". Saving memory is a necessity in order to create comprehensive software for the TS-2068. 38K of FREE poses limitations as to the number of functions that can be stuffed into a program. The Safe Disk Operating System (SDOS) provides some interesting memory conservation capabilities. We conserve a tremendous amount of FREE Ram by first creating the needed MENUS with line programming, then SAVING the Screens to diskette, and then DELETING the program lines. A 700 Byte Menu is then presented when needed by this simple 10 byte command in a program line: <LOAD /"fs" SCREEN>. Five such Menus are "canned in diskette" for a saving of about 3K of memory usage.

Other memory saving techniques are used as well. A variable file is first created in program lines. Then after the vars are imbedded in memory, the file is SAVED to disk with <SAVE /"arg" VAL>. Then the lines of programming are deleted. Ordinarily the variables in a basic program are SAVED with the program and the vars ride in with the program when it is re-loaded. The vars file in diskette serves as back up if a program is inadvertently CLEARED. Deleting the program lines saves nearly a K of memory. Most importantly, the vars file contains another memory saving device to be discussed next.

"Pseudo Hex" is a neat system that uses double character variables to represent numbers 1 through 20. 0a=0, 0a=1, 0b=2, 0c=3, on through 0u=20. Each usage of characters instead of numbers SAVES 5 bytes for numbers 1-9 or 6 bytes for numbers 10 through 20. There are 160 lines of programming and each will average 3 usages of numbers 1-20. The "pseudo hex" table saves between 4 and 5K of memory. The entire vars file is only 569 bytes only part of which is the pseudo hex table. Therefore some 4K of memory is saved this way. Pseudo hex lends itself to human memory. One can count on ones pinkies with it, using 0a for one pinkie, 0b for two, etc. Soon it becomes habit.

Another memory saving technique is the use of BOOLEAN expressions instead of IF THEN. Boolean expressions are chained in a line of programming, where IF THEN expressions would require single lines. For example, the two lines: 10 IF A=1 THEN GO TO 100. 20 IF A=2 THEN GO TO 200. A single line with BOOLEAN would be: 10 GO TO (A=0) VAL "100" + (A=1) VAL "200". The program makes extensive use of Boolean. Some lines contain as many as 12 IF THEN logicals expressed in Boolean. Memory saving is tremendous, up to 70% as compared with conventional IF THEN expressions. The average savings realized is around 30% of total program length. In this program some 3K of memory usage is conserved.

```

2046 LET DO=SI: IF K=QA AND SX+NN>LN THEN GO SUB PE: LET DO
=00: RETURN
2047 IF DO>00 THEN LPRINT : LET DO=DO-0A: LET NN=NN+0A: IF N
N>LN AND K=QA AND NN+DO>LN THEN GO SUB PE: LET DO=00: LET
NN=0A: RETURN
2048 IF DO>00 THEN GO TO VAL "2047"
2050 RETURN
2051 NEXT N
2052 GO TO VAL "2000"
2058 DIM o(0a,0a): GO TO FN
2060 GO TO FN
2061 CLS : GO SUB VAL "2586": GO SUB VAL "2572": CLS
2063 CLS : PRINT AT 01,01:"Please Select""TAB 00;"(1) TS 20
40 Printer""TAB 00;"(2) Centronics Printer": GO SUB SQ: GO
SUB IL: IF Z<0A OR Z>0B THEN GO TO VAL "2063": LET PR=Z-0A:
IF PR=00 THEN LET /P=T: LET lx=VAL "32": LET qq=oq: LET fd=
oo: GO TO FN
2065 CLS : PRINT AT 01,0F:"Does printer need a""TAB 0F;"line
feed?:""TAB 0F;"(y) yes or (n) no": GO SUB SQ: GO SUB IK
: LET FD=Z
2066 CLS : PRINT AT 01,0D:"Turn Printer ON, and:"
2067 INPUT "Input MAX Line Length?":LX: IF FD=0A THEN LET /P
=0: PAUSE 0L: POKE VAL "23323",LX: IF fd=0a THEN POKE VAL "2
3324",0J
2068 IF fd=0b THEN POKE VAL "23324",00
2070 CLS : INK 6: PRINT AT 3,6:"FUNCTION MENU""TAB 6;"(1) M
ail List Menu""TAB 6; INK 5;"(2) Caption""TAB 6; INK 6;"(3)
Format""TAB 6;"(4) Page Management""TAB 6; INK 5;"(5) Line
Space""TAB 6; INK 6;"(6) Page End""TAB 6;"(7) Letterhead""T
AB 6; INK 5;"(8) Sign Off""TAB 6; INK 6;"(9) FLASH 1;"9;" F
LASH 0;"> Set up Outline""TAB 6; INK 5;"(0) Print Outline""
TAB 6;"Page="jpg;TAB 16;"Line="jnn
2071 INK 0e: LET gg=0a: PRINT AT 0t,0k;pgj" "iAT 0t,VAL "21"
jnnj" *: GO SUB sq: GO SUB il: IF z<0a OR z>0b THEN GO TO fn
2072 IF Z=0F THEN GO SUB PE: GO TO FN
2073 IF z=0e THEN GO SUB sp: GO TO fn
2074 GO TO (z=0a) VAL "3324" + (z=0a) VAL "2000" + (z=0b) VAL "2
094" + (z=0c) VAL "2083" + (z=0d) VAL "3004" + (z=0g) VAL "3370" + (
z=0h) VAL "3384" + (z=0i) VAL "3300"
2083 CLS : PRINT AT 8,11:"FORMAT MENU""TAB 6;"(1) Single Sp
ace""TAB 6;"(2) Double Space""TAB 6;"(3) Line Length Chang
e""TAB 6;"(4) Page Center Change""TAB 6;"(5) FLASH 1;"5;"
FLASH 0;"> To Function Menu"
2084 GO SUB sq: GO SUB il: IF z=0d THEN CLS : INPUT "Input P
age Center":lqq: GO TO VAL "2083"
2086 IF z=0c THEN CLS : PRINT AT 0J,0A:"key in lgth: ": INPU
T LL: LET /p=0: PAUSE 0L: POKE VAL "23324",0J AND fd=0a)+(0
a AND fd=0b): PAUSE 0L: POKE VAL "23323",LX
2087 IF z=0e THEN GO TO fn
2088 IF z<0c AND z>0o THEN LET sd=z
2092 GO TO VAL "2083"
2094 CLS : PRINT AT 0J,0D:"Type the Cap""TAB 0d;"Line lgth
limit is: ":LX: INPUT m
2095 LPRINT TAB QQ-LEN m/08;0J: LET NN=NN+0A: GO SUB bu: OU
T po,24
2096 GO TO FN
2110 LET IN=0A
2112 CLS : PRINT "Enter Field Nbr to Correct, or "8" f
or next field.""Ni No. "j0;"Fields""1. "j08(0,0A)"2. "j
04(0,0B)"3. "j04(0,0C)"4. "j04(0,0D)"5. "j04(0,0E)"6. "j
04(0,0F)"7. "j04(0,0G): INPUT "Field Nbr or 8:"iN: IF IN=0
b THEN RETURN

```

Combining the above techniques reduced the memory length of SDOs Mail Merge from around 21K to 3K total program length. These facts are given both to help you understand the cryptic programming and to whet appetites for a later article about Boolean Programming. When studying the programming, "think pseudo hex" to understand the "o vars". Look at lines 2586 through 2590 for the variable tables. It will help to make a index card for reference to the variables. Later we will DELETE these lines and the vars will no longer be visible. While in that area, EDIT line 2590 and change the LETS for "M4()" to you own letterhead and sign off data.

#### The LLIST Instructions

Key in the LLIST as given. This is a long and laborious task and nothing can be learned in the process that cannot be learned by studying the listing. It is likely that quite a number of key in errors will result which will have to be de-bugged. Why not save yourself the labor and order the "SDOS Issue Diskette" which is offered in the yellow pages of this issue. The diskette also contains the other utilities and program presented in this issue. At \$16.95 it is quite a bargain. But whether you do or not, please follow through the logic of the following.

The program operates by <GO TO 2061>. The LLIST contains 5 programmed menus which will be SAVED as SCREENS files to diskette. Then the line numbers for the menus will be deleted and then each menu line will be re-created with a single <LOAD "name" SCREEN#> command. The Variable files of Lines 2586 through 2590 will be initialized, then the Vars will be SAVED to disk and those line numbers deleted. If you have completed the Key In project, Type <GO TO 2061> and follow the prompts until the FUNCTION MENU appears. If you cannot get that far, then you must re-check for key in errors in lines 2061, 2572, 2575, 2578, 2579, 2578, 2579, 2586, 2588, 2590 and 2596. Continue by the following steps.

1. Operate the program and exercise all menu functions. Create a mailing list, checking the menu selections of the Mailing list menu. Print the Mailing list in it's various offered modes. Test the "Print Labels" mode. Use a spare diskette to test the SAVE and LOAD functions.

2. Check all selections of the Function Menu. Create a "Outline Data Base" of at least 2 Major Topics and 2 Sub topics of each. Then PRINT the Outline. Print a Caption, a Letterhead, a Sign Off, and test the page management functions

3. If any of the above fail, a report code will appear at the bottom of screen. You must then check the line number reported, edit the line and correct the key in error.

4. We will now assume that SDOs MAIL MERGE is operating correctly in all modes. Now use a spare diskette and <SAVE /"mrg"LINE 2097> ENTER. This is a temporary save, using a different title and is for SAFETY in case you lose the program for some reason.

5. <CLEAR> the computer and type <GO TO 2061> ENTER. Respond to prompts until the Function Menu appears. <BREAK> and type <PRINT FREE> ENTER. Make a note of the figure

#### Program Listing (cont.)

```

2120 CLS : PRINT AT 0j,00:0f(0,in):AT 0u,00:"opt ";("Co Name
  " AND in=0A)+("Dept  " AND in=0B)+("St adr  " AND in=0C)+
  ("ct,St,Zp" AND in=0D)+("1st Name" AND in=0E)+("Tel Nbr " AN
  D in=0F): INPUT T4
2122 LET 0f(0,in)=t5: CLS : GO TO VAL "2112"
2550 PAUSE VAL "4e4": LET z=CODE INKEYS-48: IF z<00 OR z>0i
  THEN GO TO i1: REM # For Key 0 to 9
2553 RETURN
2554 IF PEEK VAL "23611"<VAL "221" THEN GO TO iK: REM # For
  Yes or No.
2555 LET Z=PEEK VAL "23560": POKE VAL "23611",VAL "220": IF
  Z<VAL "78" AND Z<VAL "89" AND Z<VAL "110" AND Z<VAL "121
  " THEN GO TO iK
2558 LET Z=(0A AND z=VAL "89")+(0A AND Z=VAL "121")+(0B AND
  Z=VAL "78")+(0B AND Z=VAL "110")
2560 RETURN
2567 IF IN 127-253 THEN GO TO BU
2568 RETURN
2570 CLS : PRINT AT 0j,0d:"INPUT FILE NUMBER": INPUT t6: LET
  t6="MARG"+t6: SAVE /t6 LINE 2061: BEEP 0a,0a: CLS : GO TO F
  N
2572 CLS : PRINT AT 4,4: INK 5j:"xxx "; INK 6j:"SDOS MAIL MERG
  E"; INK 5j:" xxx""TAB 3j:"MAIL LIST"; INK 3j:" LABELS "; INK 4
  j:"ENVELOPES""TAB 6j: INK 6j:"INVENTORY "; INK 2j:"Outlines""
  TAB 13j: INK 4j:"WITH""TAB 3j: INK 4j:"SAFE"; INK 6j:" DISK"; IN
  K 5j:" OPERATING "; INK 2j:"SYSTEM""TAB 11j: INK 3j: 1984 by"
  TAB 3j:"TS-2068 SAFE DISK UP-DATE""TAB 6j:"1317 Stratford Ave
  ""TAB 5j:"Panama City, FL 32404""TAB 7j:"rights reserved"
2575 FOR N=0A TO 0f: GO SUB SQ: PAUSE VAL "100": NEXT N: RET
  URN
2576 INK xa: PLOT 00,00: DRAW 00,VAL "175": DRAW VAL "255",0
  0: DRAW 00,VAL "-175": DRAW VAL "-255",00: LET xa=xa+0a: IF
  xa>0f THEN LET xa=0a
2578 INK xa: BORDER xa+0a: PLOT 0h,0h: DRAW 00,VAL "159": DR
  AW VAL "239",00: DRAW 00,VAL "-159": DRAW VAL "-239",00: LET
  xa=xa+0a: BEEP 0a/0j,VAL "40": IF xa>0f THEN LET xa=0b
2579 INK 0f: RETURN
2580 BEEP .1,40: PAUSE VAL "20": RETURN
2582 BEEP 0B/0J,0D: BEEP 0B/0J,0H: BEEP 0B/0J,0J: BEEP 0B/0J
  ,0D: RETURN
2586 LET po=127: LET oo=0: LET oa=1: LET ob=2: LET oc=3: LET
  od=4: LET oe=5: LET of=6: LET og=7: LET oh=8: LET oi=9: LET
  oj=10: LET ok=11: LET ol=12: LET om=13: LET on=14: LET op=1
  5: LET oq=16: LET or=17: LET os=18: LET ot=19: LET ou=20
2588 LET lw=00: LET xa=2: LET sq=2578: LET ln=54: LET nn=0:
  LET pg=1: LET pr=1: LET bw=2567: LET zc=5: LET sq=2576: LET
  fa=2070: LET sd=1: LET sp=2990: LET lh=2610: LET pe=3014: LE
  T ik=2554: LET il=2550: LET il=64: LET ix=80: LET qq=40: LET
  lb=8: LET fd=2
2590 DIM n6(0g,31): LET n6(0a)="TS-2068 Safe Disk Up-Date":
  LET n6(0b)="1317 Stratford Ave.": LET n6(0c)="Panama City, F
  L 32404": LET n6(0e)="Bill Jones": LET n6(0f)="904 871 4513"
  : LET n6(0g)="Sincerely,"
2596 RETURN
2600 CLS : PRINT AT 0j,0j:"SAVE Menu""TAB 4j:"<1> Save this
  Mail File""TAB 0j:"<2> Save Program + File": GO SUB sq: GO
  SUB il: GO TO (z<0a OR z>0b)3VAL "2600"+(z=0b)3VAL "2570"+(z
  =0a)3VAL "2602"

```

2 cont - 2



### Program Listing (cont.)

presented. Next, install a freshly formatted diskette and type: `<SAVE /"arg" VAL> ENTER`. This saves the variable file to diskette. We will call this your "program diskette" and it will be used for all SAVES from now on. Next, DELETE lines 2586, 2588, and 2590.

6. The Function Menu should still be still on screen. If not, type: (GO TO fm) ENTER. BREAK and type: (SAVE /"fm" SCREENS) ENTER. The disk should run and the Function Menu will be saved to diskette. To make sure, type (LOAD /"fm" SCREENS). The Function menu should boot in from disk. If not, repeat the procedure of item 6. Next, ENTER a NEW LINE 2070: (2070 LOAD /"fm" SCREENS). Enter the line, which will replace the existing line 2070. Type: (GO TO fm) ENTER. The Function menu should boot in from diskette.

7. Type <LIST 2003 ENTER>. BREAK and type <GO TO 2003 ENTER>. The Format Menu should appear. BREAK and type: <SAVE /"fo" SCREENs ENTER>. Then type <CLS> and <LOAD /"fo" SCREENs>. The Format menu should boot in from diskette. If O.K. then type a new line 2003: <2003 LOAD /"fo" SCREENs> Enter the line. Then type <GO TO 2003 ENTER>. Again, the format menu should boot in from disk.

8. BREAK and LIST line 2572. Then add Line 2574: <2574 STOP>. Type <60 TO 2572 ENTER>. The title screen should appear. Type <SAVE /"cpr" SCREEN# ENTER>. Type <CLS> ENTER. Type <LOAD /"cpr" SCREEN#>. The title screen should boot in. Type an new line 2572: <2572 LOAD /"cpr" SCREEN#>. Type <CLS> <60 TO 2572 ENTER>. The title screen should boot in from disk. Now DELETE line 2574 which has the STOP.

9. Type <LIST 2000 ENTER>. BREAK and type <GO TO 2000 ENTER>. The Mail List menu should be on screen. BREAK and type <SAVE /"ml" SCREEN\$ ENTER>. Type <CLS> <LOAD /"ml" SCREEN\$ ENTER>. The Mail list menu should boot in. Type a new line 2000; <2000 LOAD /"ml" SCREEN\$>.

10. Type: <LIST 3004 ENTER>. BREAK and type: <GO TO 3004 ENTER>. The Page Management Menu should appear. BREAK and type: <SAVE /"pg" SCREEN\$>. Type <CLS> <LOAD /"pg" SCREEN\$ ENTER>. The menu should boot in from disk. Type a new line 3004: <3004 LOAD /"pg" SCREEN\$ ENTER>. Type <CLS> <GO TO 3004 ENTER>. The screen should boot in.

11. BREAK and type: <SAVE /"SDOS MARG"LINE 2061 ENTER>.  
This SAVES the main program to disk.

12. Type: **<CAT ENTER>**. The disk directory should show the programs: **<arg VBLS> <fn BYTES> <fo BYTES> <opr BYTES> <pg BYTES> <SDGS MMR6>**. Now we will install the file zero auto load line. NEW the computer. Then type this one line program: **<10 BORDER 0: PAPER 0: INK 6: CLS: LOAD /\*SDGS MMR6\*> ENTER**. Next type a direct command: **SAVE /0 ENTER**. Next, type: **<LOAD ENTER>**. The main program should AUTO LOAD and operate.

13. BREAK and type: <PRINT FREE ENTER>. Compare this FREE report to the earlier FREE report and you will see the savings of memory resulting from the use of disk for major parts of the program. You may go ahead and operate the software now and benefit from the extra FREE memory to use for data storage.

The concepts of "Disk Dependant" software should now be clear. The disk drive, employed with ingenuity, can

```

2602 CLS : INPUT "Input Mail File Nbr:":t$: LET t$="m"+t$: S
AVE /t$ DATA o$(t$): GO TO f$
2604 IF Z=06 THEN CLS : PRINT AT QJ,QH;"INPUT FILE NBR": INP
UT t$: LET t$="m"+t$: SAVE /t$ DATA o$(t$): GO TO VAL "2000"
2990 LPRINT : LET NN=NN+OA: IF NN)=LN THEN GO SUB PE
2994 IF ad=ob THEN LPRINT : LET NN=NN+OA: IF NN)=LN THEN GO
SUB PE
2996 RETURN
3004 CLS : PRINT AT 3,5: INK 6;"PAGE MANAGEMENT""TAB 5: INK
5;"Next Page is "ipg""TAB 5:Lines to Page End=":ln-nn""TAB
11;"Select""TAB 5:"(1) Page End""TAB 5:"(2) Adjust Line N
umber""TAB 5:"(3) Re-number Page""TAB 5:"(4) To Function M
enu"
3005 PRINT AT oe,os:ipgj "jAT og,VAL "23":ln-nn" ": GO SUB
sq: GO SUB i1: IF z<oa OR z>od THEN GO TO VAL "3004"
3006 IF Z=00 THEN GO TO FM
3008 IF Z=08 THEN INPUT "Ent new lines to end. ":NL: LET NN=
LN-NL: GO TO VAL "3004"
3010 IF z=oa THEN GO SUB pe: GO TO fm
3012 IF Z=06 THEN INPUT "Enter next pg No. ":p6: GO TO VAL "
3004"
3013 GO TO VAL "3004"
3014 IF PR=08 THEN LPRINT ""ipg"":LET NN=
OA: LET P6=P6+OA: RETURN
3016 IF NN<VAL "59" THEN LPRINT : LET NN=NN+OA: IF NN<VAL "5
9" THEN GO TO VAL "3016"
3018 LPRINT TAB QQ:P6: OUT PQ,OL: LET P6=P6+OA: LET NN=OA: R
ETURN
3020 CLS : PRINT AT oj,ob;"Install Data Diskette,"TAB ob;"T
ouch ENTER": PAUSE VAL "4e4": CAT : INPUT "Enter TITLE ONLY
of C ARRY "t$: PRINT "t$: LOAD /t$ DATA o$(t$): GO TO V
AL "2000"
3300 CLS : PRINT AT oj,ob;"Outline Fill": INPUT "Enter Nbr o
f Major Topics:"j: INPUT "Enter Nbr of Sub Topics of each:
":sb: INPUT "Enter Column width:":lgt: DIM k$(j,lgt): DIM v
$(j,sb,lgt)
3304 LET a=oa: FOR n=oa TO m:
3305 IF n>mj THEN GO TO VAL "3320"
3306 PRINT AT on,oo;"Ent Major Line n"j INK oe:nj INK of:j o
r zz to quit": INPUT k$(n): IF k$(n)( TO ob)="zz" THEN LET k
$(n)="": GO TO VAL "3320"
3308 FOR y=oa TO sb: PRINT AT on,odj"Minor":AT on,oqj INK od
lyj INK of: IF y>sb THEN GO TO VAL "3316"
3310 INPUT v$(n,y): IF v$(n,y)( TO ob)="zz" THEN LET v$(n,y)
="": GO TO 3316
3312 NEXT y
3316 NEXT n
3320 LET n=mj: LET y=sb: CLS : PRINT AT oj,ob;"Print the Out
line now?""TAB ob;"y) Yes or (n) No": GO SUB ik: IF z=ob I
HEN LET n=mj: GO TO fm
3324 CLS : INPUT "Input Tab for line print:"t$
3330 FOR n=oa TO mj: IF k$(n)( TO ob)=" " THEN GO TO VAL "3
354"
3334 LPRINT TAB tz:k$(n)": LET nn=nn+ob: IF nn)=ln THEN GO
SUB pe
3338 FOR y=oa TO sb: IF v$(n,y)( TO ob)=" " THEN GO TO VAL
"3346"

```

2 cont-2

mitigate the basic deficiency of the TS-2068, namely "insufficient FREE memory" to use for programming. As the Oliver EPROM developments continue, Safe Disk Up-Date will explore each new capability in detail. In the meantime, follow on issues will discuss subscriber questions and comments about this software "SDOS Mail Merge". Feel free to write. A quick letter response will be sent and the questions comments will appear in the next issue.



North American F-86

[from SAFE Disk  
UPDATE-OCT. 87]

```

3342 LPRINT TAB (ztoa)vs(n,y)'' : LET nn=nn+ob: IF nn=ln THE
N GO SUB pe
3346 NEXT y
3350 NEXT n
3358 CLS : PRINT AT o,ob:"Delete the Data?" : TAB ob:"(y) Ye
s or (n) No": GO SUB ik: IF z=oa THEN DIM k(oa,oa): DIM v(o
oa,oa)
3360 GO TO fa
3370 FOR n=1 TO oc: LET ns=ns(n): GO SUB VAL "3380": NEXT n:
LET ns=ns(of): GO SUB VAL "3380": GO TO fa
3380 IF ns(LEN ns)=" " THEN LET ns=ns(1 TO LEN ns-oa): GO TO
VAL "3380"
3382 LPRINT TAB qq-LEN ns:ob)ns: LET nn=nn+oa: RETURN
3384 LPRINT '' : LET ns=ns(og): GO SUB VAL "3380": LPRINT ''
: LET ns=ns(oe): GO SUB VAL "3380": LET nn=nn+oh: GO SUB pe
: GO TO fa ~ End ~

```

## Printer Control Programming

(LET P=0) takes care of "sending LPRINT character streams" to a Centronics printer. The other half is sending "Printer Control Codes" to command the printer to do such things as change type fonts, set italic, and set underline modes. Most printers have a group of dip switches to manually set these functions, but usually the dip switch panel is located in a difficult to reach area. What is needed is "software control". Lets explore how to build a software "printer control group". First, a MENU is needed. The menu would look something like the following:

1. Pica Style 2. Elite Style. 3. Condensed Style. 4. Italic Font. 5. Underline.

When the menu is presented, a touch of key 1-5 should set a variable to the value of the key touched. See the INKEY\$ prompt routine in this issue. We will let the variable "ps" be our switch. After the menu and the INKEY\$ prompt, this program line will do it: (900 LET ps=z). For example: if Key 1 is touched, Pica style is selected and "ps=1" Before continuing you should make sure that the printer actually responds to a LPRINT command. Type (LPRINT "12345" ENTER". If 12345 is printed to paper you may proceed. If not, then you must set up the printer correctly before proceeding.

Now, assuming that a menu has been constructed, we will build a printer control group. LINE 900: (900 LET ps=z: GO TO 1000)

Line 1000 should contain the programming needed to CANCEL all special printer set-ups to make ready for commands to establish the print styles selected at menu. Some printers have a single command code to do this, BUT many printers will also RESET TOP OF FORM when the RESET command is used. That would disturb a page format after a print style change has been directed. Line 1000 should contain groups of CANCEL commands for every conceivable printer set-up, WITHOUT resetting TOP OF FORM. Then you'll be ready to set the print style selected at menu.

Before going to the next lines, we will discuss how control codes are sent to a printer. Lets use a typical control code group as would be given in a printer manual. (27,100) (80,102). To send such a group, this programming would be needed: (line 60 SUB BU: OUT 127,27: GO SUB BU: OUT 127,100: GO SUB BU: OUT 127,80: GO SUB BU: OUT 127,102 >). Explanation: (OUT 127) sends the control code to the printer, BUT- the printer must be READY to receive a control code (60 SUB BU) is a line to assure PRINTER READY. We will now construct "line BU as line 2000. (2000 IF IN 127<>253 THEN GO TO BU) (2002 RETURN).

To explain the above: When a printer is READY to receive a control code, (IN 127) produces character code 237. If NOT READY, (IN 127) produces the character code 253. So, line BU (2000) will loop itself until the printer is READY. Now, using the examples given, line 1000 can be constructed: (1000 GO SUB bu: OUT 127,27: GO SUB bu: OUT 127----- continue all control codes needed to CANCEL ALL printer set-ups---). Refer to your printer manual for the correct control codes

Next, (IF THEN programming is needed to set the print styles selected at menu. Typically, these would be: (1002 IF ps=1 THEN GO SUB BU: OUT 127,-----the printer control codes needed to set pica style. Use GO SUB BU between each.)

(1004 IF ps=2 THEN GO SUB BU: OUT 127,-----the command codes needed to set ELITE style. Use GO SUB BU between each OUT 127 command.)

Continue building program lines as above for commanding the printer to set the other menu selections. When finished, the last line should be (line 60 TO the line of your major menu). Try out the "print style menu" and the program lines that have been constructed. Chances are that the print style changes selected at menu WILL be made at the printer, BUT, extraneous line feeds will occur. If so, check the printer manual to find the "Cancel Buffer" control code. Usually this is character code 24, but some printers use an extra command code. To eliminate extraneous line feeds, the Cancel Buffer code is inserted after each group of control codes for a special function. Dont forget to use (60 SUB BU) between each OUT 127 command.

NOTE; The information in this article is believed to be correct, but the LIST group and author take no responsibility for any damage incurred by the experimenter using this information.

### ALTERNATE MODEM POWER SUPPLIES

Like many other TIMEX enthusiasts I recently purchased a surplus 2050 modem board. While the modem worked fine, I did not like the extra tangle of cables it created on my desk. It was only a short time before I figured out how to run the modem without an extra wall transformer by obtaining a 9 volt supply from my 2068. If you are using a modem and don't have a socket for the extra power supply, or you just don't like the extra cable, this article shows how to run the 2050 modem with any TIMEX computer without using an extra power supply.

Before I describe any changes to the modem board, a short description of the original power supply would be helpful. There are 12 integrated circuits on the modem board, 11 of which are powered by the computer's 5 volt supply obtained from the computers rear edge connector. The remaining chip, a LM-1458 op-amp is the only one that uses 9 volts. The other two components that are connected to the 9 volt supply are the relay used to dial the number you are calling, and the carrier detect LED (Light Emitting Diode). These three components draw a negligible amount of power, in fact, the relay only draws power in short "bursts" when the modem is dialing. This low 9 volt consumption makes it easy to find an alternate power supply for the modem.

The easiest way to obtain the 9 volts is from a battery. The "transistor radio" type is fine, and will power your modem for many hours of "connect time". But, batteries do go dead, and usually at the most inconvenient times. If you decide to use a battery, keep a spare handy to replace the original when it loses power. All you need to connect a battery to the modem is a "9 volt battery snap", available from Radio Shack, a small soldering iron, and a bit of rosin core solder. See FIGURE ONE for details on where to solder the connector. If you don't want to solder anything to your modem board, the battery snap can be soldered to a 1/8" mini phone plug, also available from Radio Shack. Connect the red wire of the battery snap to the tip terminal of the plug, and the black wire to the body, or side terminal. The battery adaptor can then be plugged into the power socket on the back of the modem. You can reduce your modem's 9 volt consumption by running the carrier detect LED off the 5 volt supply. This involves cutting one lead of the LED, adding a jumper wire, and adding a 500 ohm 1/4 watt resistor to the modem board. See FIGURE TWO for details. If you do run the modem off a battery, just remember to disconnect it when not in use. If left connected, the battery will go dead over night.

If you use a ZX/81, TS-1000, TS-1500 or SINCLAIR Spectrum you can obtain 9 volts for the modem from the edge connector of the computer. Only two jumper wires are needed to make this modification. See FIGURE THREE for details on where to connect the jumpers on the modem and the adaptor board the plugs onto the

computers edge connector. If you make this modification, remove or "plug" the power connector on the back of the modem board so another power supply can't be plugged in.

TS-2068 owners do not have things so easy, there is no connection to the edge connector pin that supplies 9 volts on the other TIMEX models. There isn't even a suitable supply to tap inside the computer. All is not lost though, the narrow ZX/81 sized edge connector can be cut off the adaptor board, the remaining pins removed with a hot soldering iron, and a larger 2068 sized connector soldered on. (Available from Zebra Systems, address at the end of the article.) The 15 volt supply that powers the computer can then be tapped off one of the pins that was not on the small connector. The Zebra Systems connector has all the pins numbered and labeled, but if you are using another connector, see FIGURE FOUR for pin locations and names. Once the 15 volts is available on the new connector, a voltage regulator will have to be used to supply the necessary voltage for the modems operation. A 7809 voltage regulator (9 volts) can supply all of the power needed for the modem, unfortunately, it is nearly impossible to find. Two alternatives are left, use another voltage regulator, or run the modem off a different voltage. It just so happens that most 9 volt wall transformers, at low current draw, produce about 13 volts. Since the modem uses very little power, it actually runs off the 12-13 volts supplied by the "9 volt" adaptor. Measure the voltage yourself and see. Radio Shack does sell a 7812 voltage regulator (12 volts) that can be used to power the modem. Details of its connection are in FIGURE FIVE. If you have a 5 volt regulator handy (7805) it can be tricked into producing 9 volts by the addition of two resistors to the circuit. See FIGURE SIX for details. Either regulator will work fine, use the one of your choice. Mount the regulator on a small heat sink and attach it to an empty spot on the modem board with epoxy or double sided foam tape, making sure the heat sink and regulator pins are not touching any components on the board. Once again, remove or plug the modem's power socket.

If you have any electronics construction experience, you will find these modifications easy. I will, however, offer a few words of advice to the novice "hardware hacker". Use a small (25 watt or less) soldering iron and rosin core solder. DO NOT use acid core solder or brush on Flux. The jumper wires do not have to be thick, "telephone" wire will work fine. And please check all the modifications twice before plugging anything in.

- John Bell



SOLDER THE RED WIRE FROM THE BATTERY SNAP HERE

TOP OR  
COMPONENT  
SIDE

SOLDER THE 500Ω  
RESISTOR ACROSS THIS RESISTOR

VIEW OF THE BOTTOM  
OF THE SMALL  
ADAPTOR BOARD

ADD THIS  
JUMPER WIRE

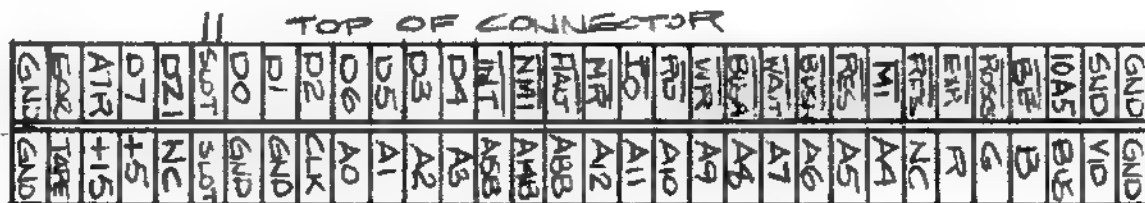
VIEW OF THE BOTTOM OF THE MODEM BOARD

ADD THIS  
JUMPER WIRE

TIME/SINCLAIR  
00460A

## POWER CONNECTOR

FIGURE THREE



15 VOLTS HERE

**BOTTOM OF CONNECTOR**

FIGURE FOUR

NOTE! SOME NAMES ABBREVIATED

BOTTOM OF  
ADAPTOR BOARD  
GOLD FINGERS?

SOLDER A  
JUMPER WIRE  
FROM THE 15V.  
PIN IN FIG. FOUR  
TO THIS PAD —

BOTTOM VIEW OF MODEM BOARD  
BUT TOP OF REGULATOR

— MOUNT AS IN TEXT  
WITH JUMPERS (3)  
SHOWN

TIMEX / SINCLAIR  
00460A

FIGURE FIVE

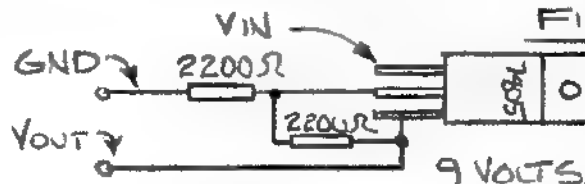
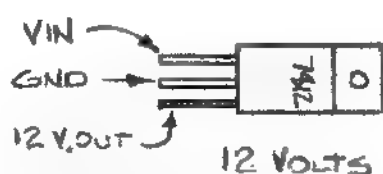


FIGURE SIX

ADD 2 RESISTORS  
TO 7805 AND  
REPLACE 7812 IN  
FIG. FIVE

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[Info courtesy: John Pazmino] A Polish Trading Company.

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SZYŃKA (ŁOPATKA) - shoulder ham	454 g 1 can	
MIELONKA WIEPRZOWA - chopped pork	300 g 1 can	
MIELONKA "Luncheon meat"	300 g 1 can	
WOŁOWINA W SOSIE WŁASNYM -	300 g x 2 cans	
beef in natural juice		
WIEPRZOWINA W SOSIE WŁASNYM -	300 g x 2 cans	
pork in natural juice		
SMALEC WIEPRZOWY - pork lard	750 g 1 can	
PAROWKI W ZALEWIE - frankfurters in broth	225 g 1 can	

### KOMPUTERY I WYPOSAŻENIE DODATKOWE Computers - and Additional Equipment

\$1772 TIMEX 2048 / USA \$148.00  
Komputer osobisty 8 bitowy, ROM 16 KB, RAM 48 KB, w zakresie programowania pełna zgodność z komputerem Spectrum ZX, Basic - podstawowy język komunikacji, możliwość współpracy z odbiornikiem TV, magnetofonem, drukarką, stacją dysków, manipulatorem (joystick) bez konieczności podłączenia interfejsu. Posiada możliwość generowania prostych dźwięków.  
Personal computer, 8 bit, ROM 16 KB, RAM 48 KB, in the programming field compatibility with Spectrum ZX computer, basic language of communication, possibility of cooperating with TV, tape recorder, printer, disk station, manipulator (joystick) without need of interface connection. Has possibility of generating simple sounds.

### PLEDY — Plaids

BP001 ALPACO "Yacht" / Włochy	\$23.00
92% wełna, 8% polyester, wym. 130 x 170 cm.	
Alpaco "Yacht", 92% wool 8% polyester, size 130 x 170 cm	
BP006 ALPACO "Roulette" / Włochy	\$9.50
70% akryl, 30% inne, wym. 130 x 170 cm	
Alpaco "Roulette", 70% acrylic, 30% other, size 130 x 170 cm	

### A CASSETTE GROWS IN BROOKLYN by John Pazmino

If you're looking for quality C-10 cassette tapes, hop on any train headed for Downtown Brooklyn. Then skip over to Jackpot Sound Inc, 466 Fulton Street near Duffield Place.

There you'll find genuine Scotch C-10 computer cassettes, in hard boxes, all cellophane wrapped on original hangers from Minnesota Mining and Manufacturing Company. Cost: 10 for one dollar! Hey!, that's what you pay just for the boxes alone!!

The 5-minute duration on each side is perfect for just about all Spectrum/TS2000 programs and for the shorter ZX81/TS1000 programs.

Yes, more things grow in Brooklyn besides trees and Haitians.

What's this? The last time you went to Brooklyn you had hives for a month? Well, they did go away eventually, yes?

Alright, already, you don't HAVE to go to Brooklyn. Jackpot has a New York outlet at 30 East 14th Street near University Place. Take the green, yellow, or gray train to Union Square for the same ten-for-a-buck deal.

## CROSS WORD PUZZLE

Borrowed from  
MAY/JUNE 1987 RAMTOP

by Theo Turk.  
April 1, 1987

At last, someone finally wrote an Electronic Cross-word puzzle that can be played on any TS1000/1500 Computer. With this program, you have a choice of solving the pre-programmed puzzle as listed here or entering your own puzzle by simply changing AS, BS and CS; Lines 10-40.

When first run, the computer will ask you for a "size of puzzle". A maximum size of (19 x 19) can be accommodated. Second, the computer will want to know the number of "Blocks" required. These are the "Black Squares" as seen on every cross-word puzzle.

Line 10 contains all of the "Across" information that will be scrolled at the bottom of your screen. Note: The data format, as typed in, is non-critical. Note: The first character in Line 10 MUST BE an Inverted "A" - Code 166.

Line 20 contains all of the "Down" information that will be scrolled at the bottom of your screen. Again-Note: The data format, as typed in, is non-critical. Note: The first character in Line 20 MUST BE an Inverted "D" - Code 169. The Inverted "A" and "D" characters are used to signal the computer to change signs when required and also MUST BE included.

Line 30 (BS) contains the "Answers" for Across and MUST BE typed in exactly as follows: Let BS="(A0)JFK(A4)RAT(A8)..(" etc. Note: The last character, before the end quote mark, must be a "(" character.

Line 40 (CS) contains the "Answers" for Down and like Line 30 must be typed in as: Let CS="(A0)JAW(A1)FLO(A2)KENNYROGERS(A4)..(" etc. Note: The last character, before the end quote mark, must be a "(" character.

The correct answer is determined by the number of letters between the last ")" and the next "(" character. Example: Let BS="(A0)JFK(A4)...; the correct answer for (A0) across is "JFK" and is 3 letters long. Example: Let CS="(A0)JAW(A1)FLO(A2)KENNYROGERS(A4)...; the correct answer for (A2) down is "KENNY ROGERS" and is 11 characters long.

Type in the program as listed, then RUN 1000. As soon as the program stops in Line 1050, then delete Lines 2-5, 1000-1050. Run the program and enter "11" when asked for the size of the puzzle. Now, enter "22" for the no. of Blocks (Black Squares) required then enter - A3,A7,B3,B7,D0,D1,D5,D9,DA,E6,F3,F7,G4,H0,H1,H5,H9,HA,J3,J7,K3,K7.

You should notice that as you type in the 2nd character for each entry, a black square appears at that position. After inputting the last item, the screen will begin scrolling. Notice the sign indicates "Across". This is the data that you entered into AS; Line 10. As soon as Line 10 has become depleted, the sign will automatically change to "Down". This is the data that you entered into AS; Line 20.

To enter an answer requires (2) Key strokes. If you think the answer to (A0) "the missiles of October char." happens to be -JFK-, then press "A" followed by "0".

The scrolling will stop.

Enter "JFK".

Each character will appear on screen as you type it in. Now, one of two things will occur. If the answer is correct as typed in, the screen will start scrolling, after a short delay. If the answer is not correct, the computer will automatically erase it from the screen.

There isn't any final check to determine when all of the answers are right - the computer will judge each entry separately. To stop the program, press "Break".

```

1  REM (followed by 750 X's)
2  LET Z$="C36441 + 116 (Zero's 0)".
3  LET Z$=Z$+"260D270D280D2628373438380029343C3300
    CDBB023EFDBCC9C5D5E5CDD14038FB444DCDBD077EF5CDD140
    30FBF1E1D1C1C9217C40CDD840FE2638F9BE30F657329A40
    2BCDD840FE1C38F9BE30F6329940D61C5F0121002A0C40230909
    7EBA20FB2323160019229540C911FFFF062519D010FE0000
    18F6221540CD1C1108234E234678B1C9E5ED5B854021C540010100
    FEA6280621CB40012100ED439740010600EDB0E1C9"
4  LET Z$=Z$+"2A0C4011B60219228740114F001922854021BF40CD3641
    382328260BED438F402322894021C140CD364138102813ED439140
    23228B4021C340CD3641DA4B0D20053E0D320040ED439340
    23228D40CD2A0A2A0C40232323220E403A2140FE053804FE13380A
    213C00CDD809222940C947C53E1CD73C10FC327B403E76D7D7
    C1483E26C5F5D7AFD73E1BD70D20FC3E76D7F13CC110ED327C40C9
    CDF1403680010500CD350FC9"
5  LET Z$=Z$+"AF3222402A89407E325B40FEA6CC4441FEA9CC4441545D
    23ED4B8F40EDB0E5ED5B8740213C40012000EDB0E12B113C401A77
    213D40011F00EDB0216400CD2941CDD140DA0D42CD460F
    D0CDF1402A8B40ED4B91403A9740CB6F28072A8D40ED4B9340
    0B78B1CA0D427EFE102320FA56235EE52A9940A7ED52E120E7
    119B403A7B40D61C470E00237EFE112002237EFE10280512130C10F5
    79A7CA0D42C5D52A9540ED4B97407EFE80280BCDD840
    CDCE1430F8127713097EA72808FE762804FE8020E8E1C1119B40
    1ABE200513230D20F721B80BCD294179A7CA0D42
    2A9540ED4B97407EA7CA0D42FE76CA0D42FE80CA0D42361B0918EC"

```

CODE 100

```

0 LET AS="(A0)The missiles of October char. (A4)The xxx patrol (60's
series (A8) Actress Smithers (B0) Pub staple (B4) Old Mcdonald
refrain (B8) Lupino (C0) Diane prince (D2) Fall mo. (D6) Title
for Hitchcock (E0) Meadows and Mansfield (E7) Lynda's costar
(F0) Hockey great (F4) Consolation prize (F8) In the xxx (ready
to air) (G0) Kind of collar (G5) Actor Christopher (H2) xxx Smart
(H6) Actor Vallone (I0) Hit since 1977 (J0) Dialog-writers asset
(J4) The elephant xxx (J8) NBC s company (K0) Pluto (K4) Adam xxx
of rock (K8) Iniquitys home "

```



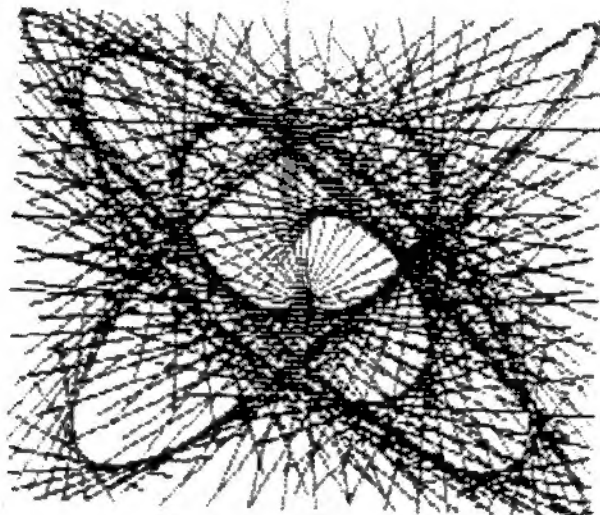
CODE 169

```

20 LET AS=AS+"(A0) Maxilla (A1) Ziegfeld (A2) Singer-actor
  (A4) Actor Christopher et al. (A5) xxx Supply of pop music
  (A6) Pulls (A8) Garner role (A9) Nabokov book (AA) Actress
  Martin (C3) Actor Murray (C7) Clampetts source of wealth
  (E0) xxx Kidd (1972 film) (E1) Fleming of game-show fame
  (E5) Plant (E9) Glaswegian negative (EA) Newhart setting
  (F6) The xxx trap (1961) (G3) xxx Blu Dipinto Blu (G7)
  Frankensteinian milieu (H4) TV series, 1973-74 (I0) WJN
  Anchor (I1) Bali xxx (I5) Actor Johnson (I9) Persona for
  Snoopy (IA) Seaside acquisition "
30 LET BS="(A0)JFK(A4)RAT(A8)JAN(B0)ALE(B4)EIO(B8)IDA(C0)
  WONDERWOMAN(D2)NOV(D6)SIR(E0)JAYNES(E7)LONI(F0)ORR(F4)
  SOP(F8)CAN(G0)ETON(G5)WALKEN(H2)GET(H6)RAF(I0)THELOVEBOAT
  (J0)EAR(J4)MAN(J8)RCA(K0)DIS(K4)ANT(K8)DEN("
40 LET CS="(A0)JAW(A1)FLO(A2)KENNYROGERS(A4)REEVES(A5)AIR(A6)
  TOWS(A8)JIMROCKFORD(A9)ADA(AA)NAN(C3)DON(C7)OIL(E0)JOE
  (E1)ART(E5)SOW(E9)NAE(EA)INN(F6)PARENT(G3)NEL(G7)LAB
  (H4)TOMA(I0)TED(I1)HAI(I5)VAN(I9)ACE(IA)TAN("
50 LET BLOCK=16893
60 PRINT AT 21,0;"ENTER SIZE OF PUZZLE..."
70 INPUT A
80 POKE 16417,A
90 RAND USR 16514
100 PRINT AT 21,0;"ENTER NO. OF BLOCKS RECQ..."
110 INPUT A
120 FOR B=1 TO A
130 RAND USR BLOCK
140 NEXT B
150 RAND USR 16905
160 STOP

1000 LET A=16514
1010 POKE A,16*CODE ZS+CODE ZS(2)-476
1020 LET A=A+1
1030 LET ZS=ZS(3 TO)
1040 IF ZS<>" THEN GOTO 1010
1050 STOP

```



```

10 REM For T5-2068 Synapse
20 PRINT "Enter 4 numbers betw
  sen 1 and 20"
30 INPUT a,b,c,d
35 CLS
40 LET t=0
50 LET x1=125+125*SIN (a*t)
60 LET y1=87+87*SIN (b*t)
70 LET x2=125+125*SIN (c*t)
80 LET y2=87+87*SIN (d*t)
90 PLOT x1,y1
100 DRAW x2-x1,y2-y1
110 LET t=t+.01
120 GO TO 50

```

JOE E. JENKINS  
3100 Mockingbird  
AMARILLO, TEXAS 79109

20

Bob Howard  
750 North Yalston Avenue  
West Covina, CA 91790  
January 20, 1988

LISTing  
c/o Harvey Rait  
5 Peri Lane  
Valley Stream, NY 11581

Dear Harvey,

After extracting my renewal check and fixing up my subscription, you can pass the rest of this on to Joe Newman, editor of LISTing. Enclosed is my check for \$15. My sticker says Jan-88...I hope that is expiration date and not last renewal. I don't think I sent in a check a few weeks before?

I can't help it but I have to respond to Cedric Bastianns comment on the Frank Toemay plea for the QL USA version published in a number of newsletters. First, I understand where Cedric is coming from, having read his meticulous and fine hardware modification article....he is a perfectionist. So it is likely he would react with horror to the various warts on the different Sinclair models, and those that crept into the Timexes. (Timex missed the power supply instability noted by Fred Nachbaur's fix...the same capacitor fix to the 7805 regulator mentioned in Digiovanni's article on the QL in December '87 LISTing!) This should be done on all ZX-81s, TS-1000s, TS-2068s and QL's according to Fred.

First Frank is an enthusiast and his real message was ...get them while they are available..or be sorry! In the December issue of "Sinclair QL World", an English slick cover magazine for the QL, they had an article "QL Goes Stateside" which discusses Frank's enterprise, Tom Bent, an American QUANTA librarian of programs (Quanta is the English QL user group). In that article, they sort of poke a pin in Frank's bubble by saying they weren't sure he was talking about the same machine they knew!

Now I own an IBM clone, the QL expanded to the limit, and all the Sinclair Timex machines except a Z80. I have news for Cedric, the IBM, its clones, and operating system and all other computers are bug ridden and flawed too. The original IBM was a disaster and quickly upgraded, but all overpriced. What Sinclair did was introduce thousands to an imaginative computer at an affordable price. I have friends with super systems, that still revere their ZX-81 for its single key stroke basic words, ability to save variable, long string handling and slicing, and other things an IBM can't do.

The only thing the IBM clone has going for it, is the thousands of suckers that have bought those systems and made the mass produced hardware cheap at the OEM level. I have a Franklin 8000 clone (which I could hardly pass up new at half price on a close out 'last one' sale). For this I was able to add 128K memory module to bring it up to 640K for \$69 list price. And from a Taiwanese clone seller down the street, I bought a Fuji Electric 3½ inch 30 megabyte hard drive for \$238, with another \$65 for a Western Digital RLL controller board. Now this is state of the art stuff that is so new you can hardly find out about it. (e.g. an XT clone can't go beyond 20 meg, but the RLL system fools it). For any other computer a hard drive of 10 or 20 megabytes is at

least \$800. The interface or board is often \$200 or more. Also you cannot buy a QL, Commodore, Atari, Coco 2 or 3 or anything else and expand it with a disk drive and not exceed the price of an IBM XT clone. What you get and what you can do of course is another matter. The Coco series of color computers use a 6809 chip that is an 8 bit relative of the 68000. (The first Amiga assembler was written on a CoCo because the programmer couldn't get a production or prototype Amiga). The CoCo 3 is a good graphics computer and the whole line is famed for no interface Weather Fax radio reception with a satellite receiver and hf receiver because the joystick port is a unique analog to digital converter that with the right software will do the whole job. (See Buck Rogers series in CTM = Computer Trader Magazine).

The QL's operating system is probably the best available to an ordinary human being at an affordable price. What other computer can pause in a program, go format a new disk and return to the program in progress without losing a variable? An IBM MS-DOS system will trash your program if you even tried to leave basic without saving it. I am not alone in my opinion. Enclosed is a quote from QUANTA that I once sent to the French language TSUG newsletter editor in Montreal. Incidentally, Real Gagnon is a computer technician working with IBM and other computers for a computer dealer. He has an un-used IBM clone at home under his desk, because he loves his QL so much more.

My advice for Cedric and other doubters who worry about the hardware, is to try Bob Hartung's advice and put in Beta Basic in a Spectrum emulated TS-2068. If you like procedures and the other Pascal like features of Modula-2 and other newer languages, then upgrade to a QL if you need the memory advantages and agility of QDOS. If you like clone hardware, but like the idea of a 68000 system, look into the construction project currently running in the "Radio and Electronics" Computer Digest section in that magazine. It is a kit motherboard for a 68000 chip that uses clone cases, power supply, drives, keyboard, etc. It may have the ability to take the QDOS ROM, which is a project I would like to see. It has an operating system by the author that is not as advanced as QDOS. It may be a re-tread of the German MC Magazine 68000 computer project that briefly appeared in R&E a year or more ago. Don't forget, one QL American with its software, is cheaper than one MS-DOS program, on average.

Oh yes, by the way, the Oliger Disk system has from the very beginning been Spectrum and 2068 compatible in a very transparent way. None of the other disk systems were until Larken came along with his 3rd version. The Oliger system also has a module to run the SP-DOS that Ramex bought in from England which was not fully fixed for the 2068 use by Ramex.

Other than storage and long documents on my hard drive, my main use of the IBM clone is to review Ham and Astronomy software for possible translation to Sinclair format for QZX (ham radio) and CAN (astronomy) newsletters. Was I shocked to find that the 8 colors of the CGA board were four colors in two brightness levels. If you up-grade to EGA to half-way approach QL resolution, then half the software doesn't work as it was made for CGA mode. And this software won't work if you have a business machine with a Hercules hi-res monochrome board. Phooey on this kind of progress. Enclosed is a Gilbert and Sullivan parody too!

Ham for goodbye - 73 Bob Howard

Paul Donnelly in Computer Shopper  
How to get Tux into IBM-PSKTSK?

# SuperFest?

**"It would be the BIGGEST yet!"** "An authority's prediction."

That is what is being said if there were to be a Sinclair Computer Fest right here in the New York area. Here is what has been proposed: Sharp's, Inc. and Zebra Systems, Inc. will be provide all the necessary up front money to get an NY area fest going; i.e. money a hotel would require, advertising money, etc. At the present time, September or October are likely months, with cooperation for fest planning and operation going to the CATS group, the Boston group and ofcourse LIST. The key word is COOPERATION...YOUR HELP IS GREATLY NEEDED to get this going! PLEASE volunteer to form, join, and run the necessary committees. WE CAN HAVE A SUCCESSFUL FEST! The NY is known and convenient to people from Pennsylvania, D.C.-Virginia area Mass., Conn., and ofcourse NY and NJ. And 3 major airports, train and bus terminals and more make it very accessible! A possible choice for a site would be very close to Newark Airport. This would make it convenient to all the travelers. These and other important considerations MUST be thought out soon, so COME to the LIST meetings, or at the very least WRITE IN YOUR SUGGESTIONS NOW!! All we need to make a NY area SUCCESSFEST is YOUR HELP! VOLUNTEER NOW! YOU KNOW YOU WANT IT, SO COME AND DO IT!!!!!!!!!!!!

**SINCLAIR LIVES ON... AND ON...**